

CIA HISTORICAL REVIEW PROGRAM
RELEASE IN FULL 1998
AVERAGE ANNUAL MONEY EARNINGS
IN SOVIET INDUSTRY
1940-58

December 1960

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CIA/RR ER 60-44

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AVERAGE ANNUAL MONEY EARNINGS IN SOVIET INDUSTRY
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1. Introduction

This report presents estimates of average annual money earnings in Soviet industry as a whole during selected years in 1940-58 and estimates of these earnings in 12 branches of industry in 1940 and 1955. The 12 branches accounted for 96 percent of total industrial employment in 1955. The estimates refer to the earnings of wage and salary workers combined and to both state and cooperative industry.*

Because the USSR does not publish data on average annual money earnings expressed in rubles, the estimates shown in Tables 1 and 2** had to be compiled from bits and pieces of information concerning annual percentage changes in real and money wages and from information in the 1941 State Plan. The principal sources for the estimates of average annual money earnings by branch of industry are the 1941 State Plan 2/ and a table in a recent Soviet source that presents the percentage relationships of the "level of average wages" in 1955 of 13 individual branches of industry*** to the "wage level" in the coal industry. 3/

The estimates of average annual money earnings in the individual branches of industry in 1940 represent the earnings of workers and employees in industrial activities in the various ministries.† The estimates for 1955 relate to individual branches of industry. In presenting the comparisons shown in Table 2 and Table 3,†† the implicit assumption therefore is made that the average wage paid by a particular industrial ministry reflects the wage level for the corresponding branch of industry. The wage level of an industrial ministry probably did not differ widely from the wage level of the corresponding branch of industry, for each ministry produced a large part of the total output of the product for which it was primarily responsible. In addition, several Soviet statements generally support the assumption, as

* Persons employed in producer cooperatives are paid on the basis of the wage and salary scales set for state industry. 1/ (For serially numbered source references, see Appendix B.)

** Tables 1 and 2 follow on pp. 2 and 3, respectively, below.

*** For a list of these branches of industry, see the second footnote on p. 8, below.

† Until 15 March 1946 the activities of the industries considered in this report were administered by the Peoples Commissariats.

†† Table 3 follows on p. 4.

Table 1

Estimated Average Annual Money Earnings
in Industry in the USSR a/
Selected Years, 1940-58

Year	Current Rubles b/	Index	
		1940 = 100	1950 = 100
1940	4,422	100	48
1941	4,709	106	51
1947	8,130	184	88
1950	9,250	209	100
1953	9,680	219	105
1954	9,920	224	107
1955	10,170	230	110
1956	10,370	235	112
1957	10,820	245	117
1958	11,290	255	122

a. For source identification numbers and methodology for this table, see Appendix A.

b. The figures for 1947-58 have been rounded to the nearest 10 rubles. Ruble values in this table may be converted to US dollars at a rate of exchange of US \$1.11 to 1 ruble. This rate of exchange does not necessarily reflect the value of the ruble in terms of dollars.

follows: (a) the ranking of branches of industry by average wages of workers (*rabochiye*) given in a Soviet source is in most cases the same as the ranking obtained from the 1941 State Plan ^{4/}; (b) the average annual wage in the machinery and metalworking industry in 1955 as estimated from data in the 1941 State Plan and from the Soviet statement that wages in "machine building" doubled between 1940 and 1955 ^{5/} is almost exactly the same as the average annual money earnings shown in Table 2*; and (c) the average wage of logging workers is reported to have been 14 percent below the average for all industry in 1940 ^{6/} compared with 12 percent below the average as calculated from the 1941 State Plan.

* P. 3, below.

Table 2

Estimated Average Annual Money Earnings
in Branches of Industry in the USSR a/
1940 and 1955

Branch	1940			1955		
	Earnings (Current Rubles)	Rank	Percent of the Average for All Industry	Earnings (Current Rubles)	Rank	Percent of the Average for All Industry
All industry	4,422		100	10,170		100
Coal	5,511	1	125	15,045	1	148
Nonferrous metals	5,249	2	119	13,902	2	137
Ferrous metals	5,126	3	116	12,532	3	123
Petroleum	5,034	5	114	11,314	4	111
Paper	3,690	9	83	10,832	5	107
Chemicals	4,837	6	109	10,336	6	102
Machinery and metalworking	5,112	4	116	10,231	7	101
Electric power	4,631	7	105	9,794	8	96
Forest products	3,597	10	81	9,478	9	93
Construction materials	3,767	8	85	9,343	10	92
Light	3,467	11	78	8,305	11	82
Food	3,412	12	77	7,116	12	70

a. For source identification numbers and methodology for this table, see Appendix A.

Table 3
Estimated Changes in Employment and Average Annual Money Earnings
in Branches of Industry in the USSR a/
1940-55

Branch	Employment		Earnings			
	Thousand Persons		as a Percent			
	1940	1955	1940	1955	as a Percent of 1940	
All industry b/	13,858	20,997	152	4,422	10,170	230
Coal	602	1,093	182	5,511	15,045	273
Nonferrous metals	258	559	217	5,249	13,902	265
Ferrous metals	435	766	176	5,126	12,532	244
Petroleum	111	220	198	5,034	11,314	225
Paper	62	125	202	3,690	10,832	294
Chemicals	488	762	156	4,837	10,336	214
Machinery and metalworking	4,412	7,201	163	5,112	10,231	200
Electric power	158	359	227	4,631	9,794	211
Forest products	2,116	2,808	133	3,597	9,478	263
Construction materials	494	1,293	262	3,767	9,343	248
Light	2,901	3,652	126	3,467	8,305	240
Food	1,821	2,159	119	3,412	7,116	209

a. For source identification numbers and methodology for this table, see Appendix A.

b. The employment figures for all industry are the totals for the 12 branches shown and are not the totals for all Soviet industry. The earnings figures are for all Soviet industry.

2. Changes in Differentials Between 1940 and 1955

Six of the 12 branches of Soviet industry considered in this report had the same relative rank in 1940 and in 1955 with respect to levels of average annual money earnings. The coal, nonferrous metals, and ferrous metals industries remained as the top three; the chemicals industry remained in sixth place; and light industry and the food industry remained as the lowest two. The paper industry rose from ninth to fifth place, and the machinery and metalworking industry fell from fourth to seventh place. The construction materials industry fell from eighth to tenth place, the forest products industry rose from tenth to ninth, the electric power industry fell from seventh to eighth, and the petroleum industry rose from fifth to fourth. Average annual money earnings increased most rapidly in the paper, coal, and nonferrous metals industries and least rapidly in the machinery and metalworking, food, and electric power industries.

The amount of dispersion of average annual money earnings among the branches of industry also increased considerably. For example, the earnings in the coal industry were 48 percent above the average for all industry in 1955 compared with 25 percent above that in 1940, and the earnings in the food industry were 30 percent below the average for all industry in 1955 and 23 percent below in 1940. With the exceptions of the electric power and construction materials industries, the industries with the highest earnings in 1955 generally tended to be those in which employment increased most rapidly during 1940-55 (see Table 3*).

Because of a lack of information, estimates of average annual money earnings for the individual branches of industry cannot be made for a more recent year than 1955. Interindustry wage differentials, however, may change somewhat as a result of the general reform of wages and salaries that has been in process since 1955. Thus a Soviet source states that, between 1956 and 1959, wages of workers increased 26 percent in the coal industry, 14 percent in the ferrous metals industry, 21 percent in the nonferrous metals industry, and 13 percent in the chemicals industry and that increases of 13.5 percent and 20.7 percent were planned for light industry and the food industry, respectively. 7/

* P. 4, above.

APPENDIX A

METHODOLOGY

1. Estimates for Table 1* of Average Annual Money Earnings in Industry in the USSR During Selected Years in 1940-58

1940 and 1941

The average annual money earnings in Soviet industry estimated for 1941 were computed from data for 1941 in the 1941 State Plan, which also reported that the planned average wage for 1941 was 6.5 percent above the average wage in 1940. 8/

1947

A Soviet source reported an increase of 22 percent in average annual money earnings between 1947 and 1954. 9/

1950

A Soviet source reported an increase of 10 percent in average annual money earnings between 1950 and 1955. 10/

1953

A Soviet source reported that average money earnings in 1953 were 219 percent of the earnings in 1940. 11/

1954

The estimate of average annual money earnings was computed by geometric interpolation between 1953 and 1955.

1955

A Soviet source reported that average money earnings in 1955 were 230 percent of the earnings in 1940. 12/

* P. 2, above.

1956

A Soviet source reported an increase of 2 percent in average money earnings of workers in 1956. 13/

1957

The estimate of average annual money earnings was computed from reported changes in real wages ("1.5 times" those in 1950) and in consumer prices between 1950 and 1957. 14/

1958

Soviet sources state that money wages of industrial workers rose 11 percent during 1956-58 15/ and that money wages of industrial workers increased at an average annual rate of 3.6 percent during 1956-58. 16/

2. Estimates for Table 2* of Average Annual Money Earnings in Branches of Industry in the USSR During 1940 and 1955

1940

The estimates were computed from data in the 1941 State Plan, which gives planned employment and wage bills for individual industrial ministries for 1941 and also gives for each one the percentage relationship of the planned average wage in 1941 to the average wage in 1940. 17/

1955

The principal source for the estimates of average annual money earnings in the individual branches of industry is a table in a Soviet source that presents percentage relationships of the "level of average wages" in 1955 of 13 branches of industry** to the "wage level" in the coal industry. 18/ The average annual money earnings in the coal industry were estimated at 15,045 rubles on the basis of a Soviet statement that wages in the coal industry in 1955 were 273 percent of those in 1940. 19/ Other indications of the level of

* P. 3, above.

** The 13 branches are "nonferrous metallurgy, ferrous metallurgy, fish, oil, machine building, chemical, power industry, timber, paper and woodworking, building materials, light industry, food industry, and meat and dairy."

wages in the coal industry are the Soviet statements that the planned average annual wage for coal miners in 1955 was 15,356 rubles, ^{20/} that the average wages of coal and shale miners in 1955 were 266.4 percent of those in 1940, ^{21/} and that average wages in the coal industry (presumably in 1957) were 50 percent above those in the machine building industry. ^{22/} Because wages in coal mining increased sharply in 1956-57 as a result of the wage reform, this differential undoubtedly was smaller in 1955.

For eight branches of industry (the nonferrous metals, ferrous metals, machinery and metalworking, petroleum, chemicals, electric power, construction materials, and light industries) the estimates of average annual money earnings were obtained directly by applying the given percentages to the average annual wage in the coal industry obtained as explained above. The estimates for the remaining three branches were obtained as follows:

Paper

The Soviet source gives a percentage for "paper and woodworking" combined. A percentage of 72 was used to calculate average annual money earnings for the paper industry alone. According to another Soviet source, the paper industry ranked next below the petroleum industry in average wages of workers in 1955. ^{23/} The percentage used for the paper industry is the midpoint between the percentages given for petroleum (75.2) and chemicals (68.7).

Forest Products

The Soviet source gives percentages for timber (64.0) and for paper and woodworking (62.3). A percentage of 63 was used to calculate the average annual money earnings for forest products, excluding paper.

Food

The Soviet source gives percentages for the "food industry" (47.3), for "meat and dairy" (46.0), and for the "fish" industry (79.6). The percentage given for the "food industry" was used to calculate the average wage for the food industry as a whole.

3. Estimates for Table 3* of Changes in Employment and Average Annual Money Earnings in Branches of Industry in the USSR During 1940-55

The employment data are based on estimates included in two unpublished reports of the Foreign Manpower Research Office of the US Bureau of the Census. ^{24/} These reports include estimates of the number of wage workers by branch of industry in 1940 and 1955 and estimates of total employment -- that is, wage workers, engineering-technical workers, employees, and all others -- by branch of industry in 1955. The estimates of total employment by branch in 1940 presented in Table 3 were obtained by multiplying the number of wage workers in each branch in 1940 by the 1955 ratios of total employment to wage workers, the ratios for the individual branches first having been adjusted uniformly to reflect the change in the ratios between 1940 and 1955 in the 12 branches as a whole.

The estimates of average annual money earnings for the branches of industry were taken from Table 2.** The averages shown in Table 2 and Table 3* for industry as a whole in 1940 and 1955 were taken from Table 1.*** The weighted averages for industry as a whole computed from the 12 branches are somewhat below the averages computed for industry as a whole by the method explained above.

* P. 4, above.

** P. 3, above.

*** P. 2, above.

APPENDIX B

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